



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

Ang

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/087,688	03/01/2002	Quock Ying Ng	STL10351	4885

7590 01/28/2004

Jennifer M Buenzow
Seagate Technology LLC
Intellectual Property Dept. - SHK2LG
1280 Disc Drive
Shakopee, MN 55379-1863

EXAMINER

DAVIS, DAVID DONALD

ART UNIT PAPER NUMBER

2652

DATE MAILED: 01/28/2004

8

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/087,688

Applicant(s)

NG ET AL.

Examiner

David D. Davis

Art Unit

2652

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 November 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).
3. Claims 1-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Albrecht et al (US 6,160,686) in view of Boutaghou et al (US 6,122,130). Albrecht et al shows a ramp 32 that includes at least one ramp surface for releasable engagement with a tab 34 characterized by a tab hardness. In column 7, lines 37-48 of Albrecht et al disclose a body molded from a compound formulation consisting essentially of a polymer and embedded particles away from the ramp surface considered to have the same hardness as the tab hardness. The polymer of Albrecht et al is characterized by a polymer surface tension.

Albrecht et al, however, is silent as to the ramp including a liquid that is chemically incompatible with the polymer with the liquid being in the form of droplets that are distributed in the polymer.

Boutaghou et al shows in figure 3 a ramp including a liquid that is chemically incompatible with the polymer with the liquid being in the form of droplets that are distributed in the polymer. The liquid maintains an equilibrium thickness of the liquid on the ramp surface.

The liquid of Boutaghou is characterized by a liquid surface tension that is lower than the polymer surface tension. The liquid of Boutaghou et al is further characterized by a viscosity that facilitates travel of the droplets in the polymer. Irregularities are formed by the droplets of Boutaghou et al traveling to the ramp surface.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to provide the ramp of Albrecht et al with a liquid that is chemically incompatible with the polymer with the liquid being in the form of droplets that are distributed in the polymer as taught by Boutaghou et al. The rationale is as follows: one of ordinary skill in the art at the time the invention was made would have been motivated to provide a ramp with a liquid that is chemically incompatible with the polymer with the liquid being in the form of droplets that are distributed in the polymer so as to produce a effective and optimized coefficient of friction.

Response to Arguments

4. Applicant's arguments filed November 3, 2003 have been fully considered but they are not persuasive. Applicant asserts on page 6 in the paragraph bridging pages 6 and 7 that "there is no equilibrium level of lubricant present on the surface of the ramp". First of all, the American

Art Unit: 2652

Heritage® Dictionary of the English Language, Fourth Edition defines equilibrium as “a condition in which all acting influences are canceled by others, resulting in a stable, balanced, or unchanging system.” Secondly, the claims set forth a “liquid that . . . **maintains** an equilibrium thickness of the liquid on the ramp surface” (emphasis added). Boutaghou does, as required by the claims, has a liquid that is in a condition in which all acting influences are canceled by others, resulting in a stable, balanced or unchanging thickness of the liquid on the ramp surface. If the liquid was not stable, the liquid would not be able to being providing on the ramp surface.

In the second full paragraph on page 7, applicant asserts that “Applicant’s corresponding structure at the least includes a body molded from a compound formulation consisting essentially of a polymer and a liquid that is chemically incompatible with the polymer, the liquid being in the form of droplets that are distributed in the polymer and maintains an equilibrium thickness for the liquid on the ramp surface.”

Applicant is incorrect in stating that the language in claim 13 which requires “means for loading/unloading the at least one read/write head to the at least one disc” corresponding structure is “at the least includes a body molded from a compound formulation consisting essentially of a polymer and a liquid that is chemically incompatible with the polymer, the liquid being in the form of droplets that are distributed in the polymer and maintains an equilibrium thickness for the liquid on the ramp surface” As stated in the specification on page 5, “When the read/write heads 36 are to be brought into operation in a loading process, the actuator 32 moves the tab 48 of the ramp surface 52 and positions the read/write heads 36 to the desired position relative to the disc surface.” The corresponding structure for the “means for loading/unloading

Art Unit: 2652

the at least one read/write head to the at least one disc” is the actuator 32, tab 48 and ramp surface 52, at least of which Boutaghou discloses.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to David D. Davis whose telephone number is (703) 308-1503. The examiner can normally be reached on Monday thru Friday 9:30 to 6:00. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9314.


Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900. Any other

Application/Control Number: 10/087,688

Page 6

Art Unit: 2652

inquiry should be directed to the customer service center whose telephone number is (703) 306-0377.



David D. Davis
Primary Examiner
Art Unit 2652

ddd